^{105}Zr

The first observation of ^{105}Zr was reported by Äystö et al. in "Discovery of Rare Neutron-Rich Zr, Nb, Mo, Tc and Ru Isotopes in Fission: Test of β Half-life Predictions Very Far from Stability" in 1992 (1992Ay02). At the Ion Guide Isotope Separator On-Line (IGISOL) in Jyväskylä, Finland, targets of uranium were bombarded with 20 MeV protons. β decays were measured with a planar Ge detector, while γ-rays were measured with a 50% Ge detector located behind a thin plastic detector. "Only a slight indication of ^{105}Zr is seen in the A=105 spectrum. However, at this mass number we detected a 127.9-keV γ transition in coincidence with β particles giving further evidence for ^{105}Zr." The measured half-life was 1000^{+1200}_{-400} s.

Adapted from reference (2012Ny02)

1992Ay02 J. Aysto, A. Astier, T. Enqvist, K. Eskola *et al.*, Phys. Rev. Lett. **69**, 1167 (1992).

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